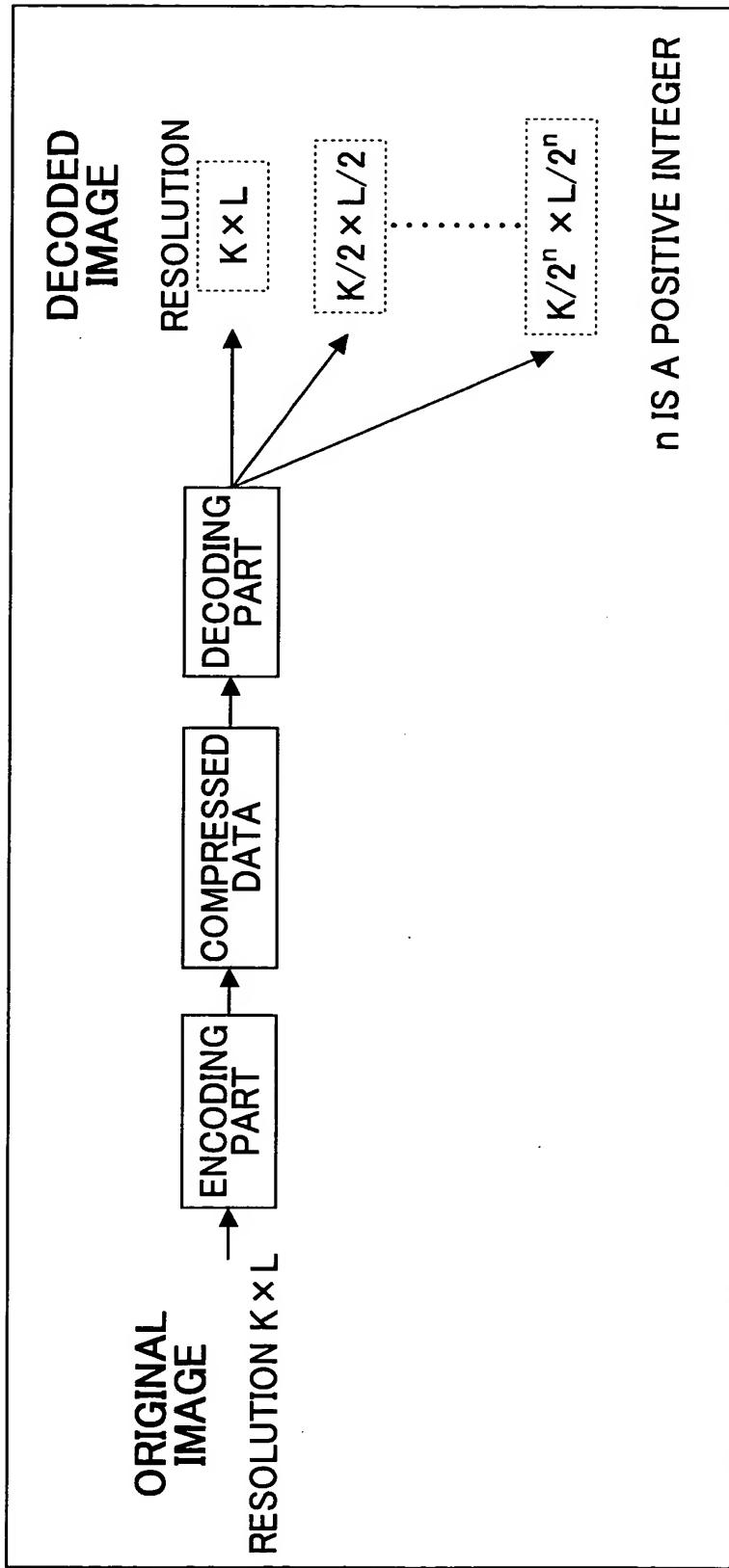


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FIG.1

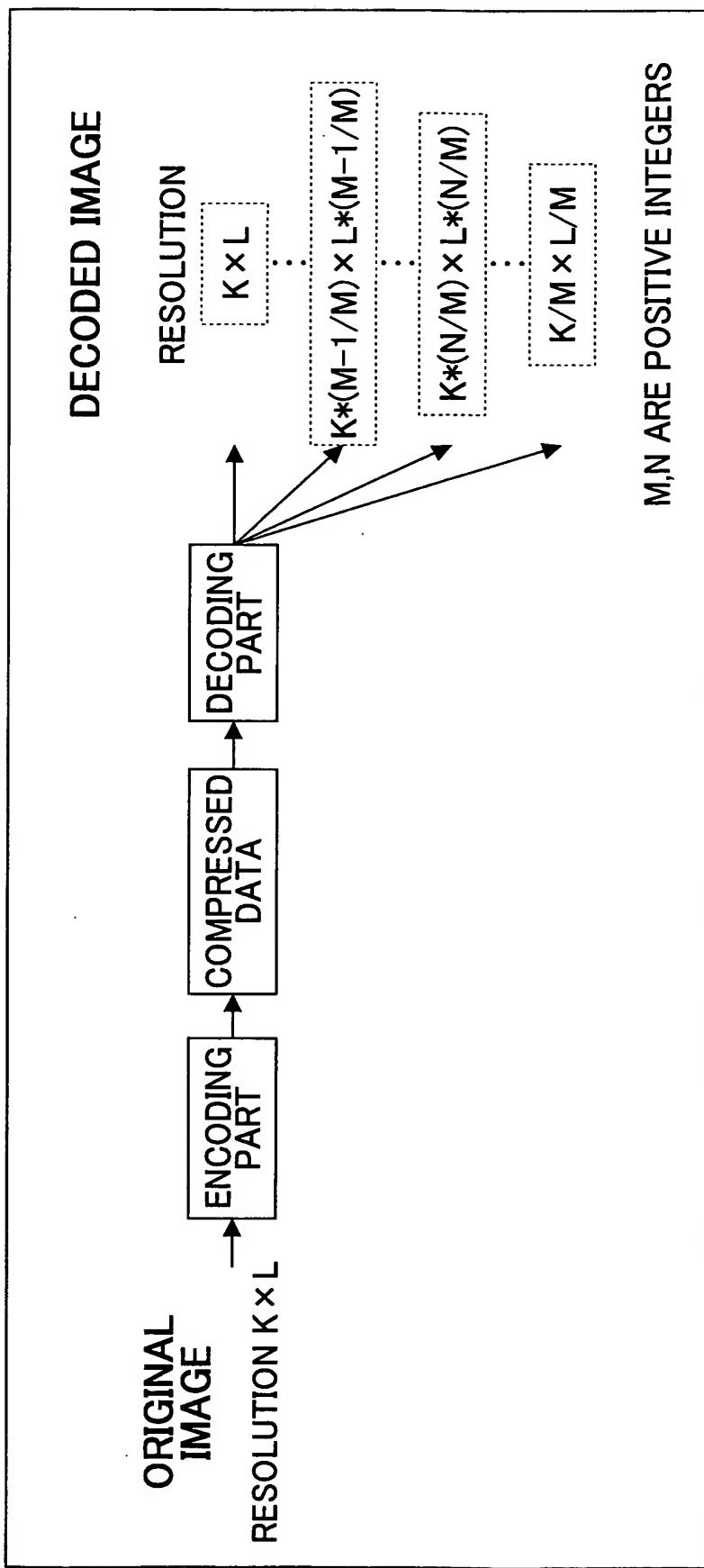


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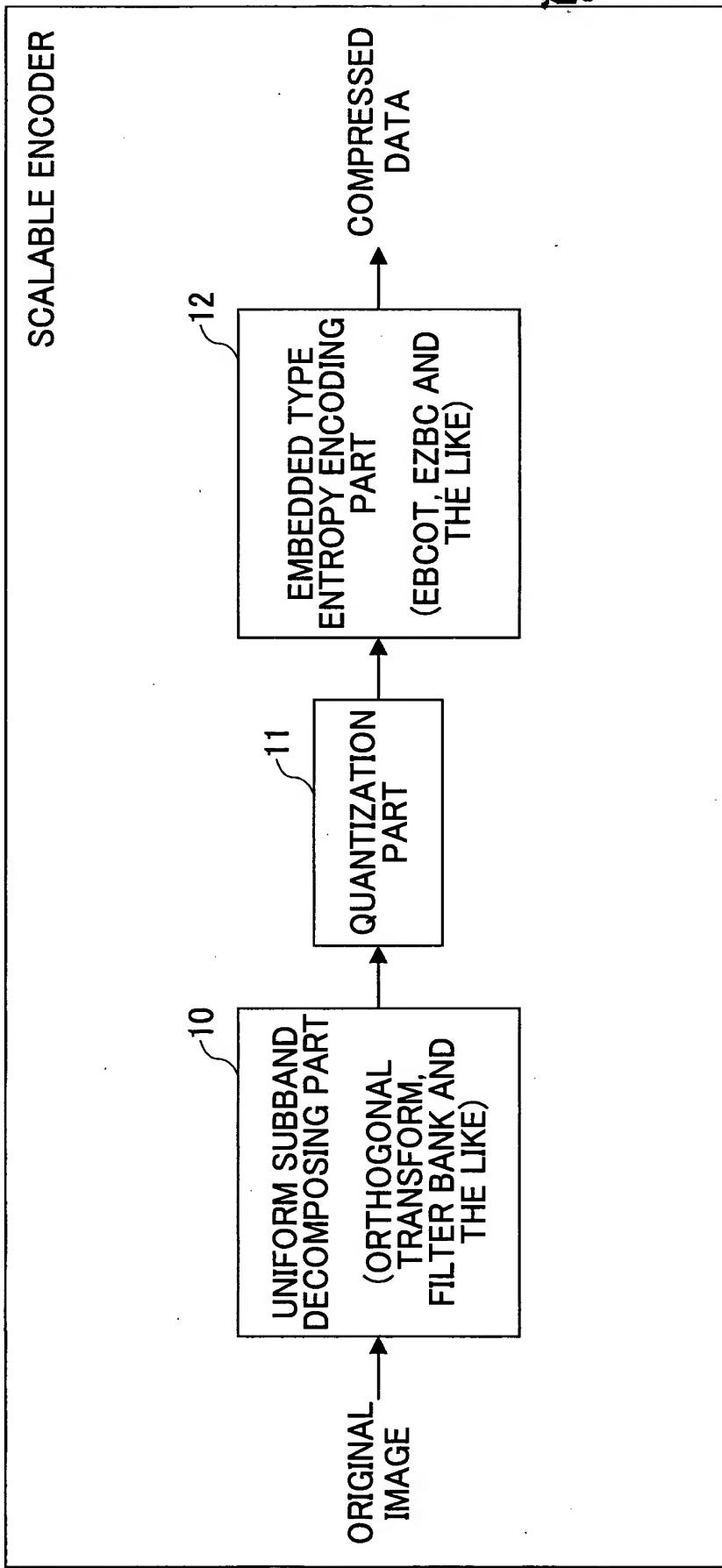
FIG.2



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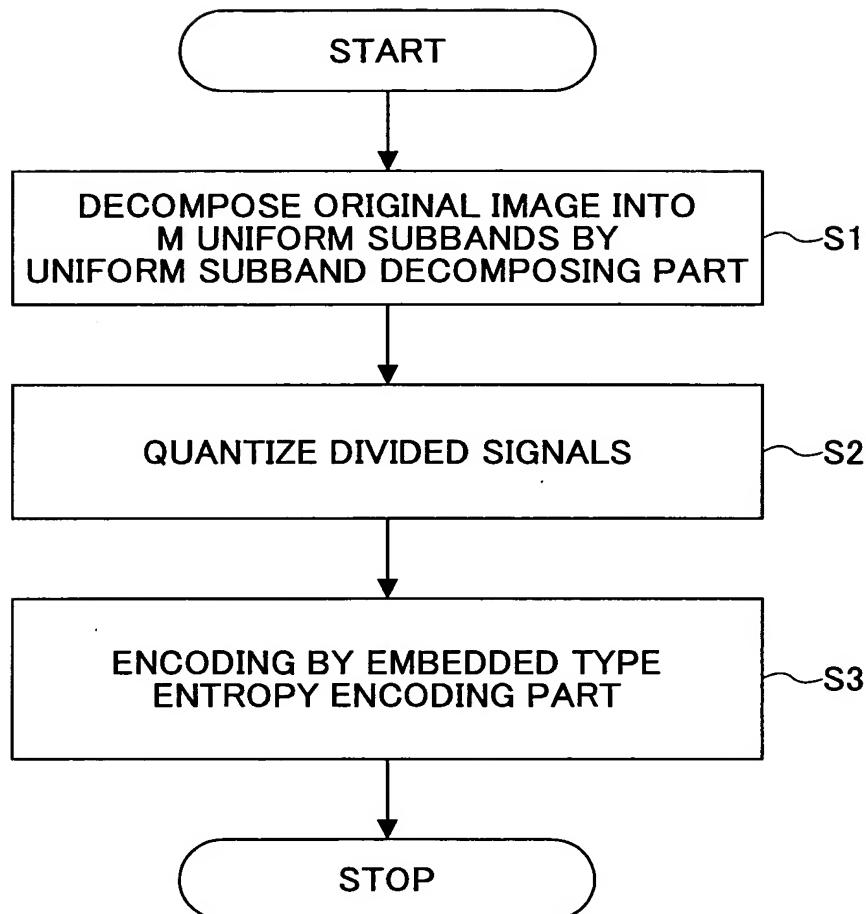
FIG.3



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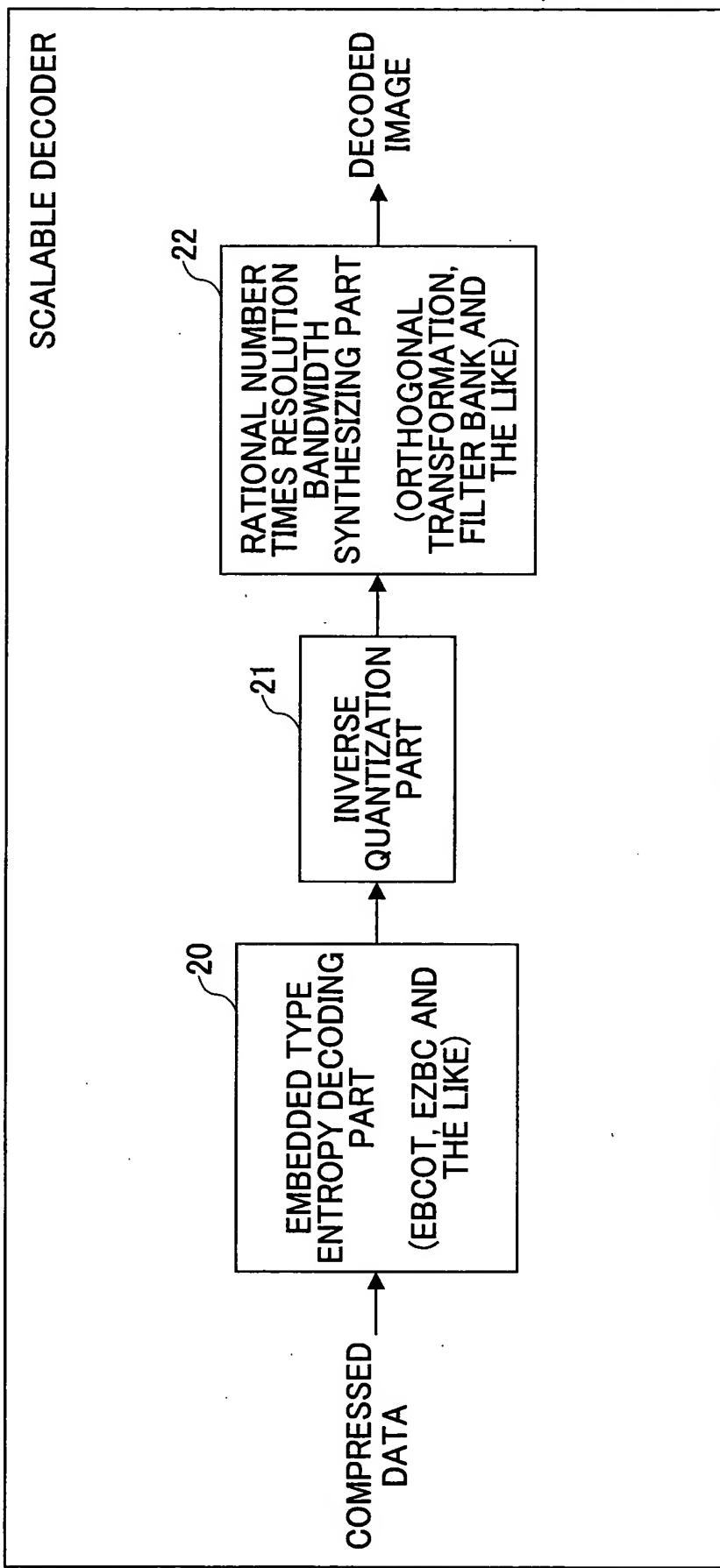
FIG.4



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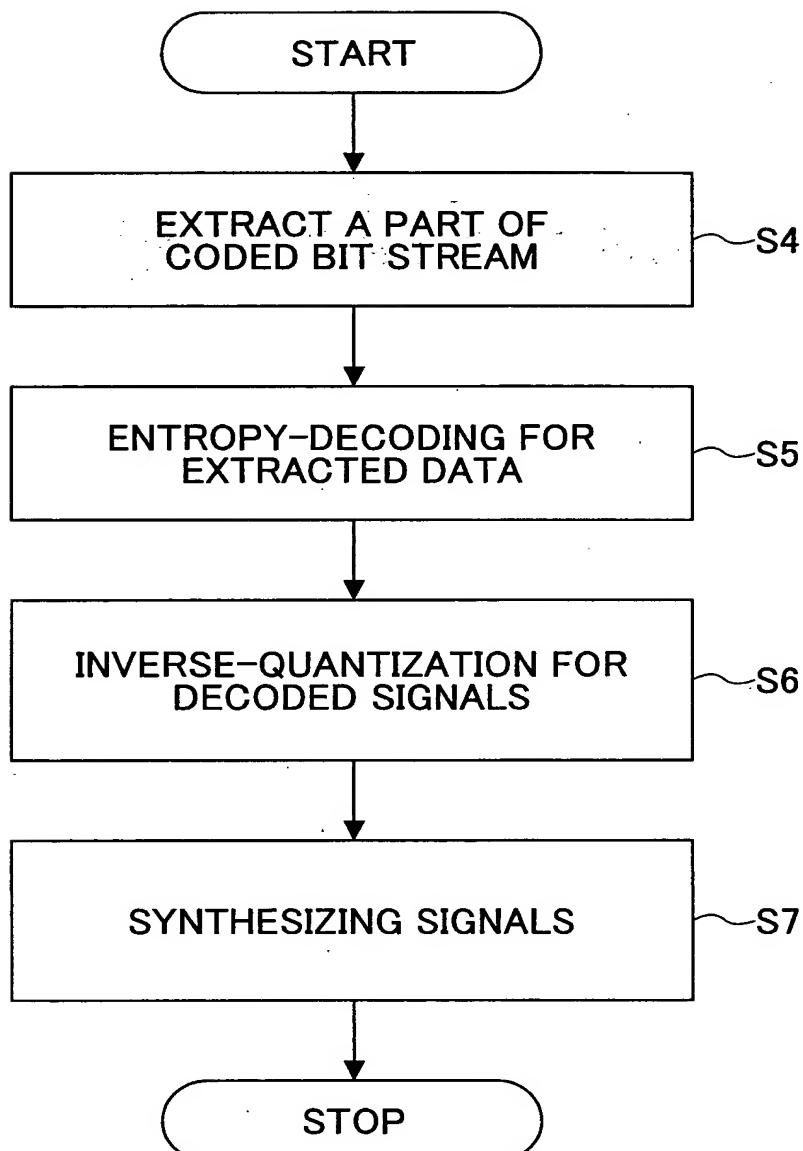
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FIG.5



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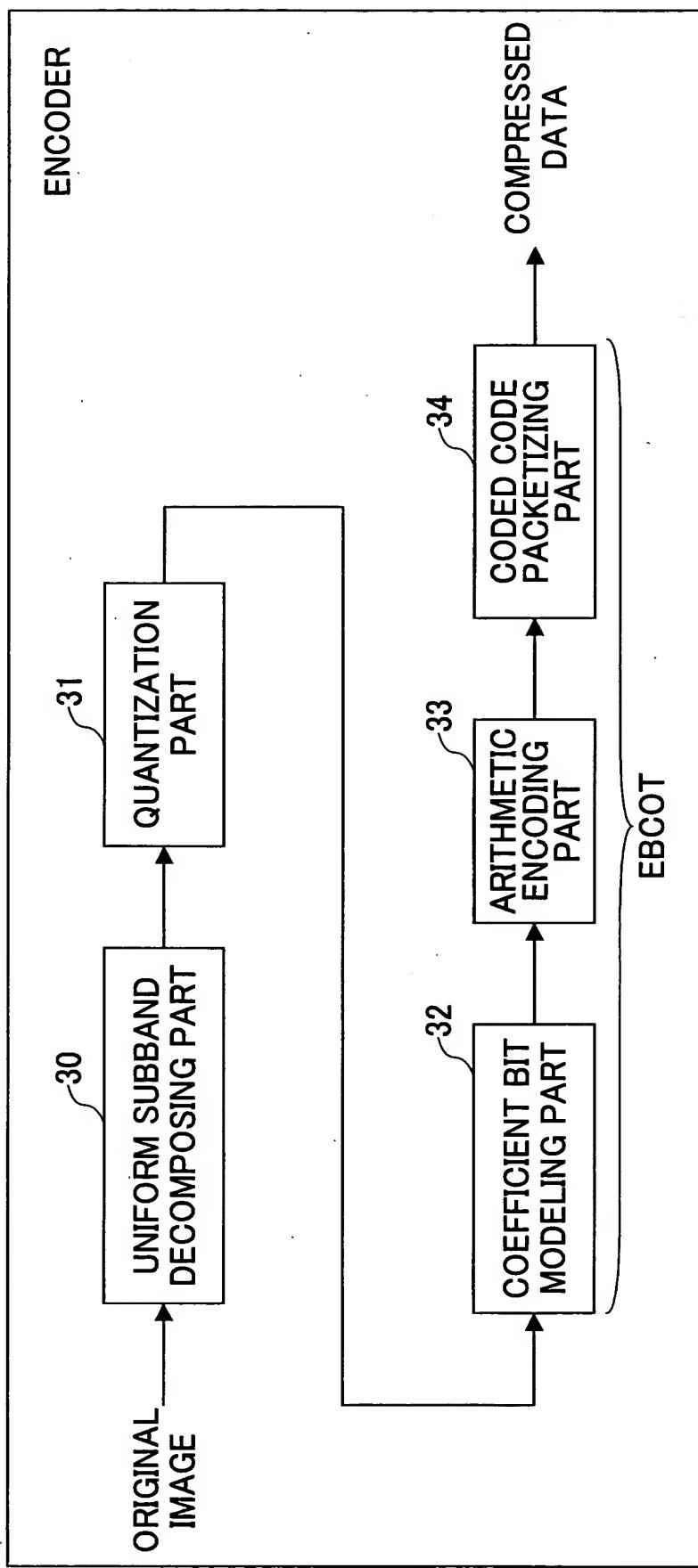
FIG.6



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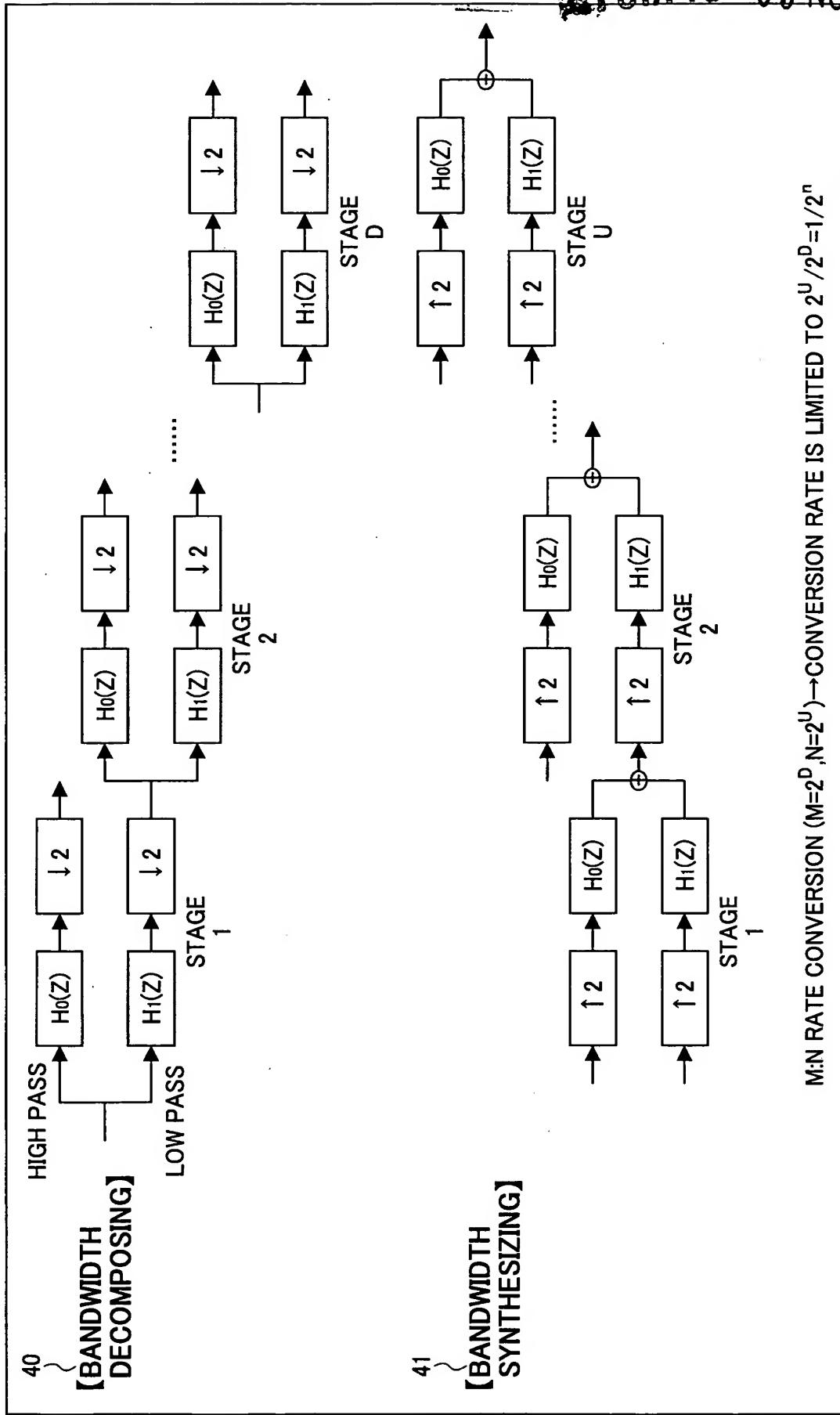
FIG. 7



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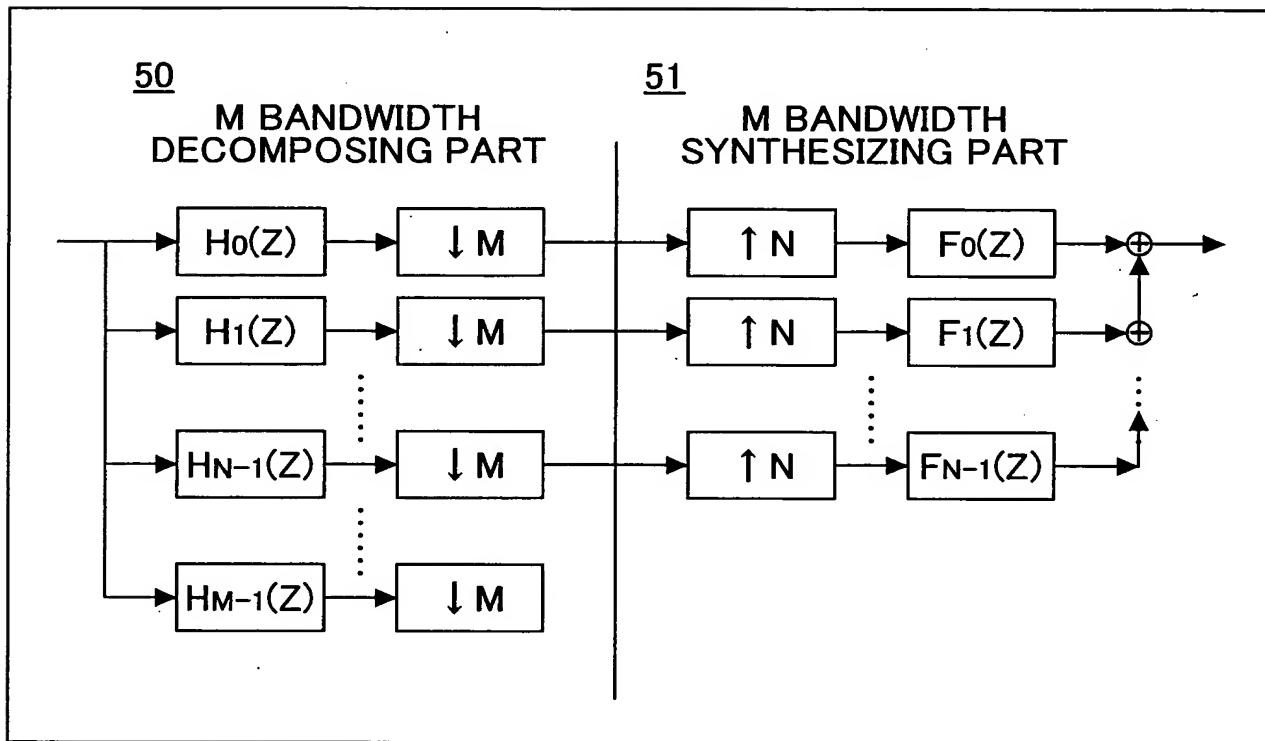
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FIG.8



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FIG.9

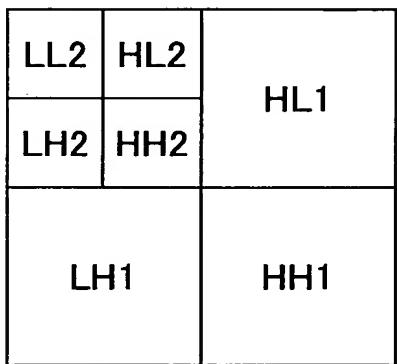


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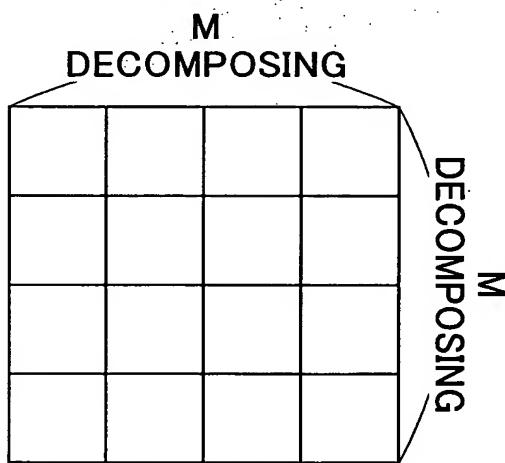
FIG.10

60



JPEG2000
(Mallat DECOMPOSITION)

61

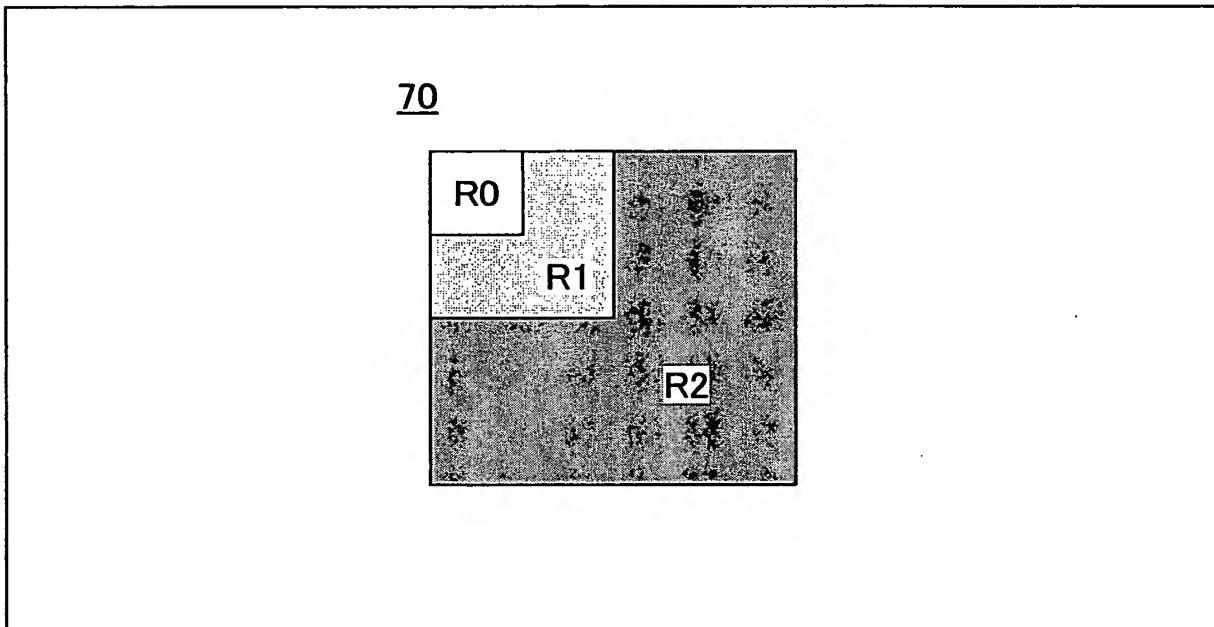


PRESENT INVENTION IS USED
(UNIFORM SUBBAND
DECOMPOSITION)

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FIG.11

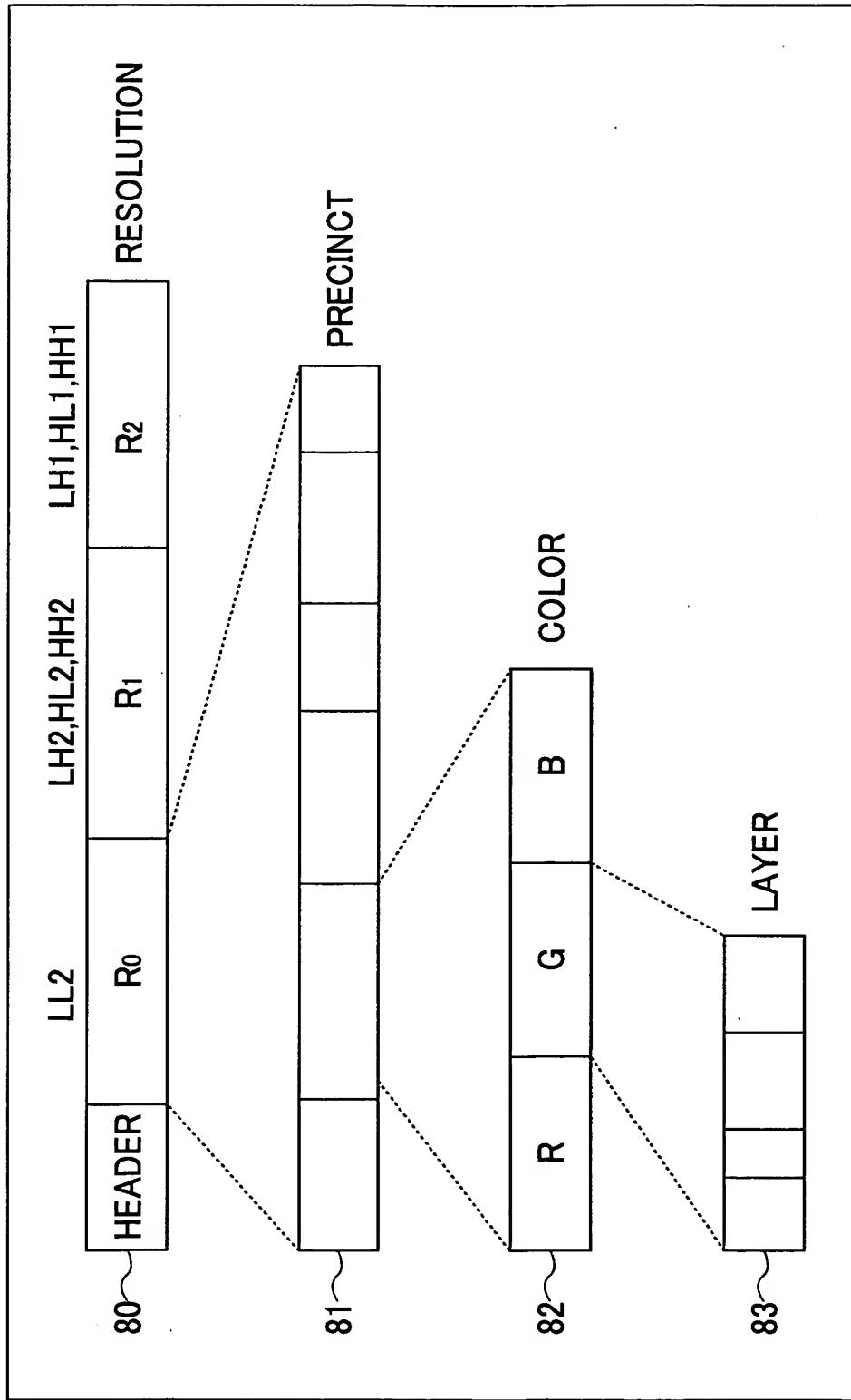


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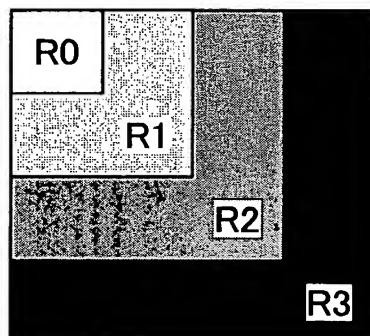
FIG.12



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FIG.13

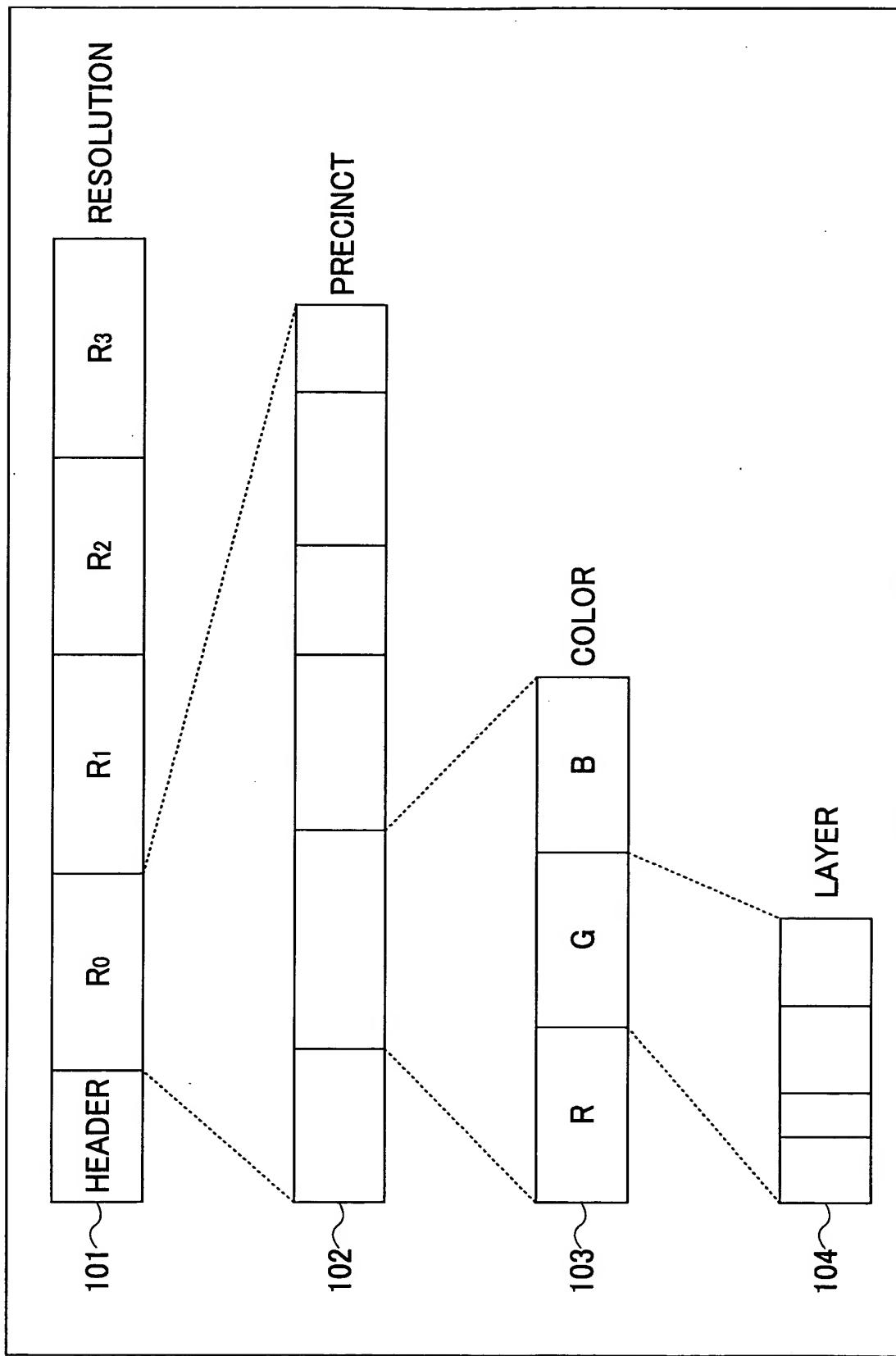
90



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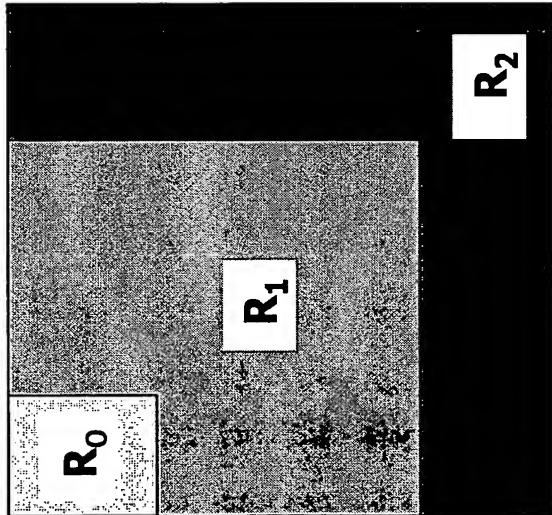
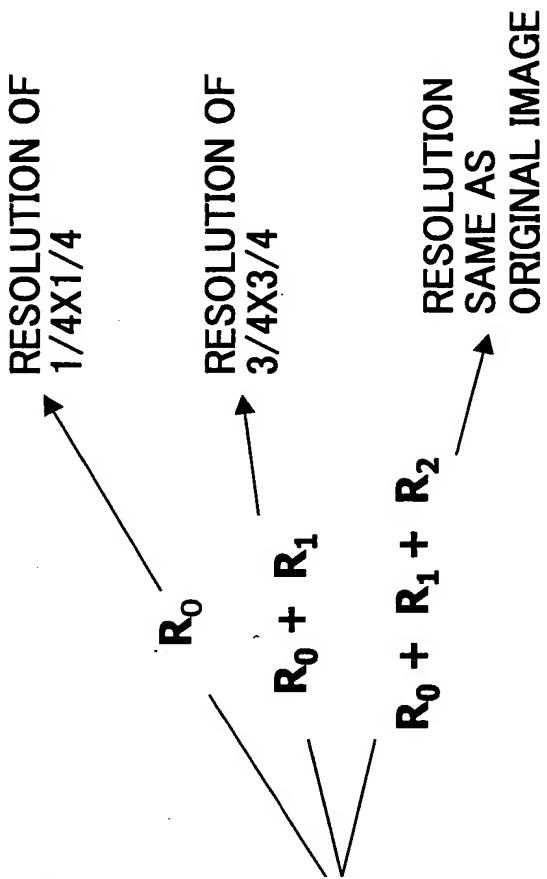
FIG. 14



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FIG. 15

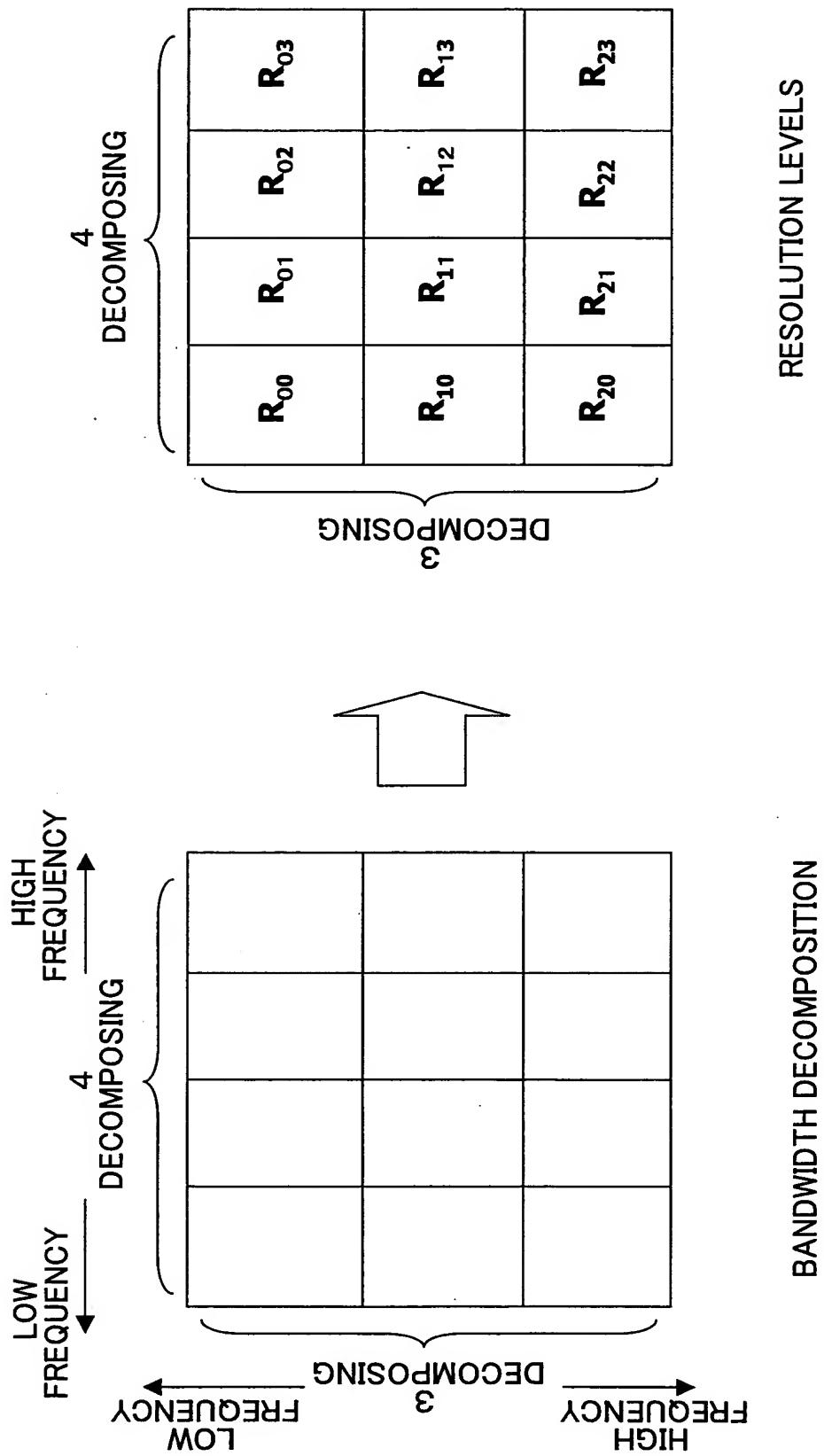


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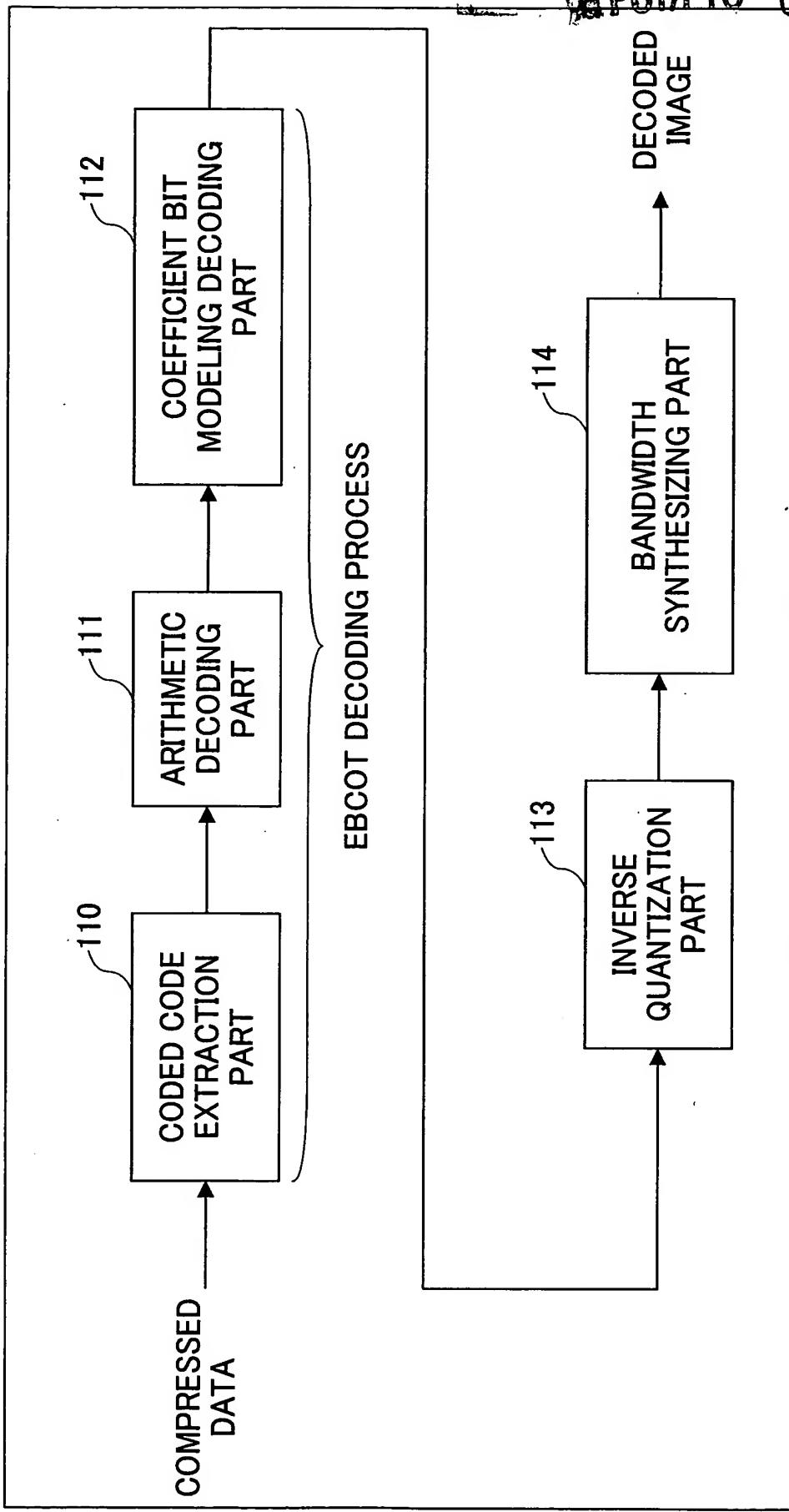
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FIG. 16



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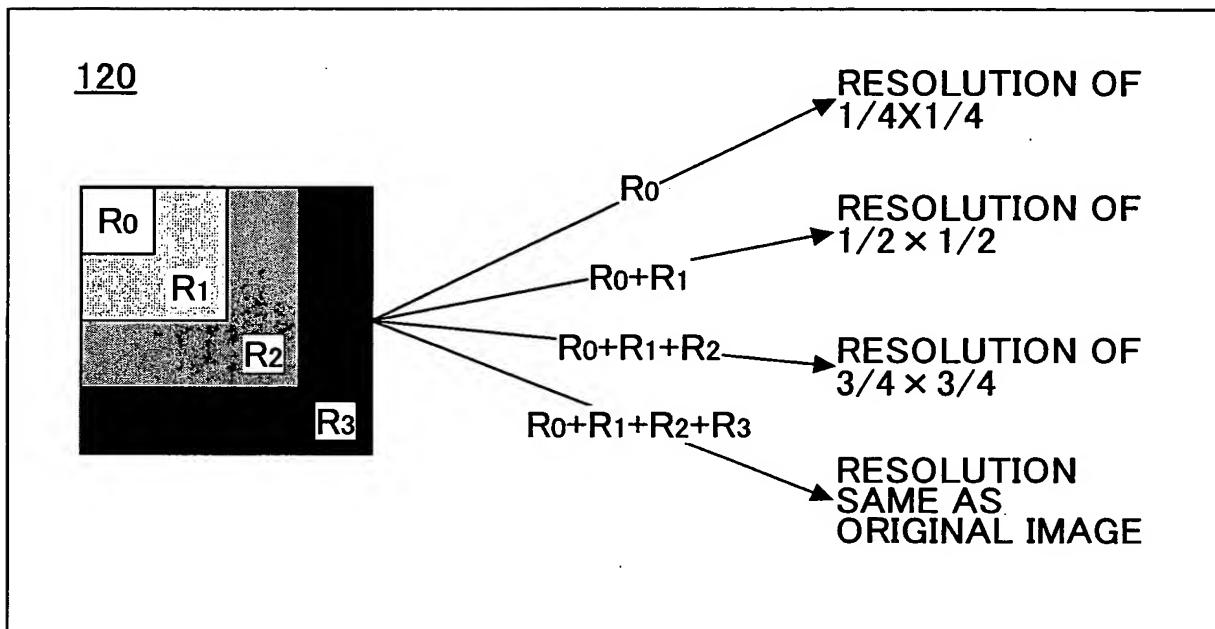
FIG. 17



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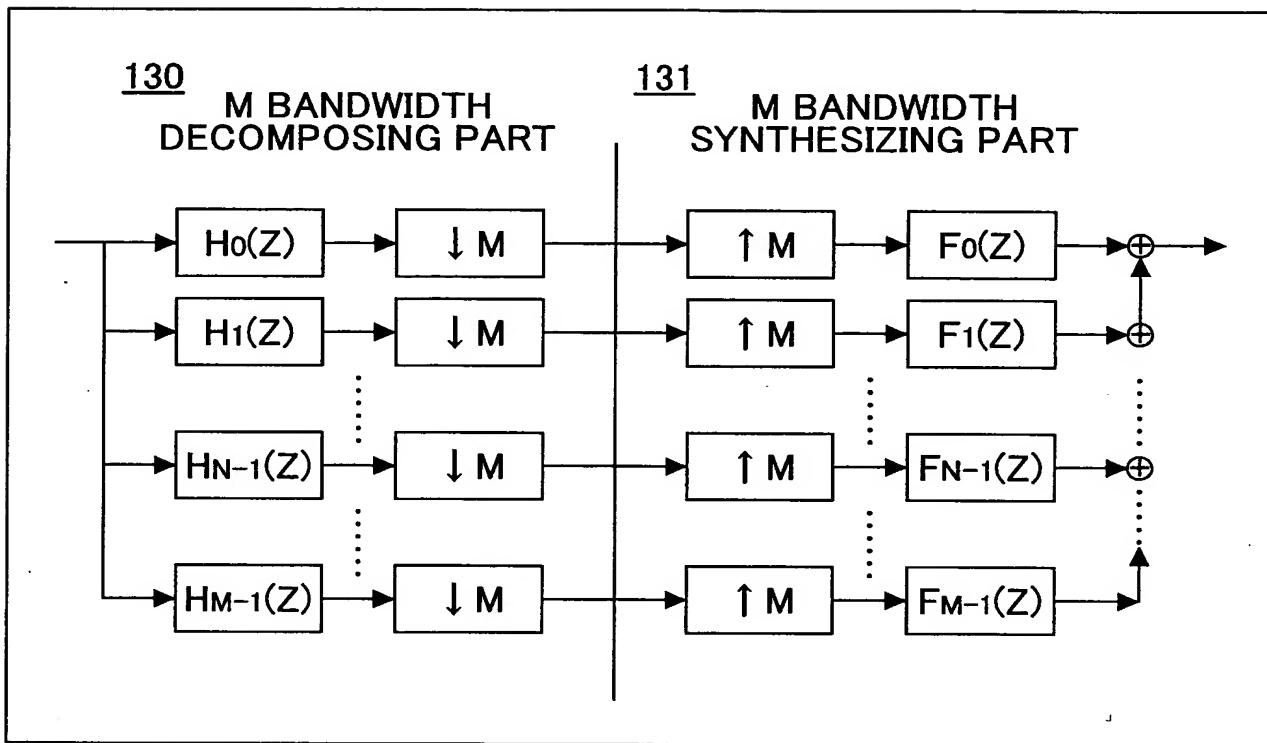
FIG.18



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FIG.19



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FIG.20

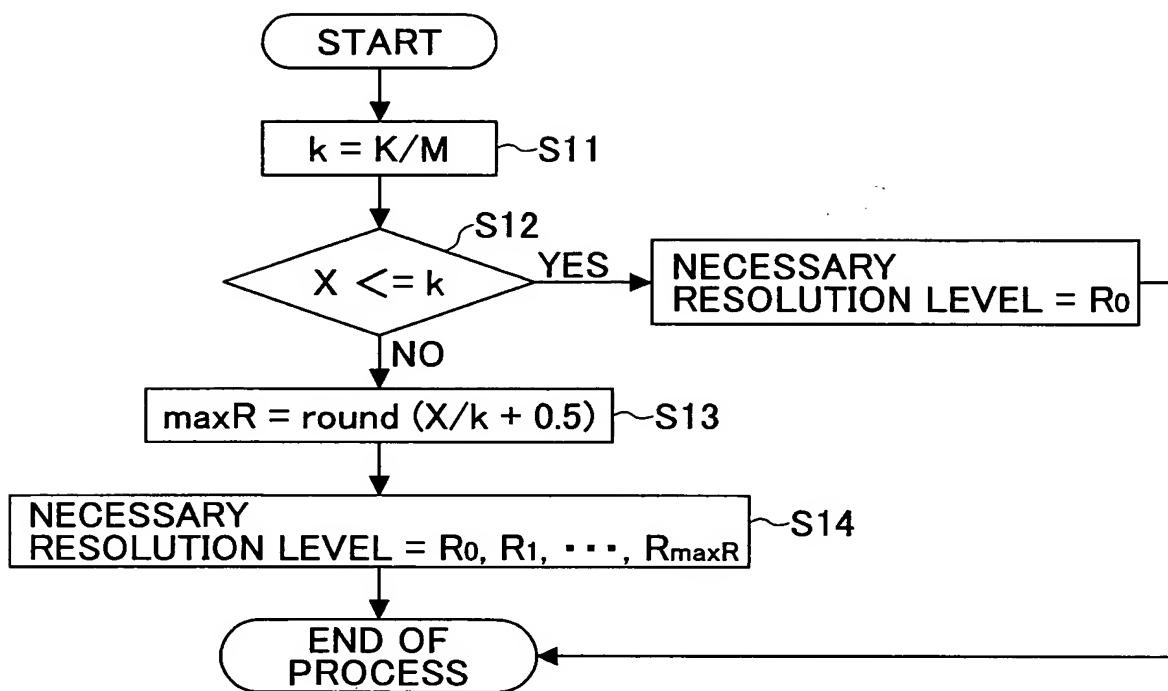


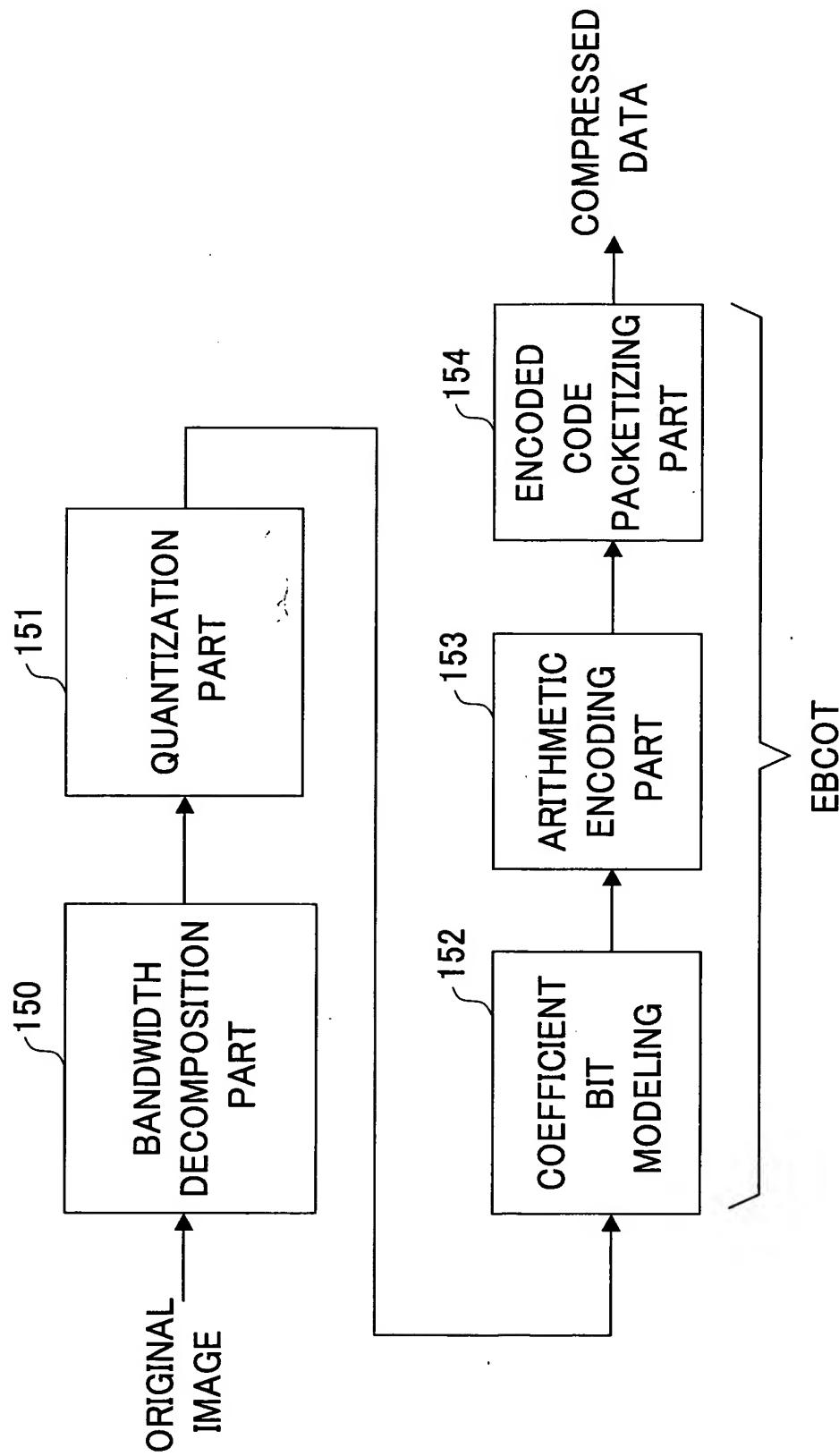
FIG.21

$$\text{NECESSARY RESOLUTION LEVEL} = \begin{pmatrix} R_{00}, & R_{01}, & \cdots & R_{0\max RY} \\ R_{10}, & R_{11}, & \cdots & R_{1\max RY} \\ \vdots & \vdots & \ddots & \vdots \\ R_{\max RX0}, R_{\max RX1}, & \cdots & \cdots & R_{\max RX\max RY} \end{pmatrix}$$

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FIG.22



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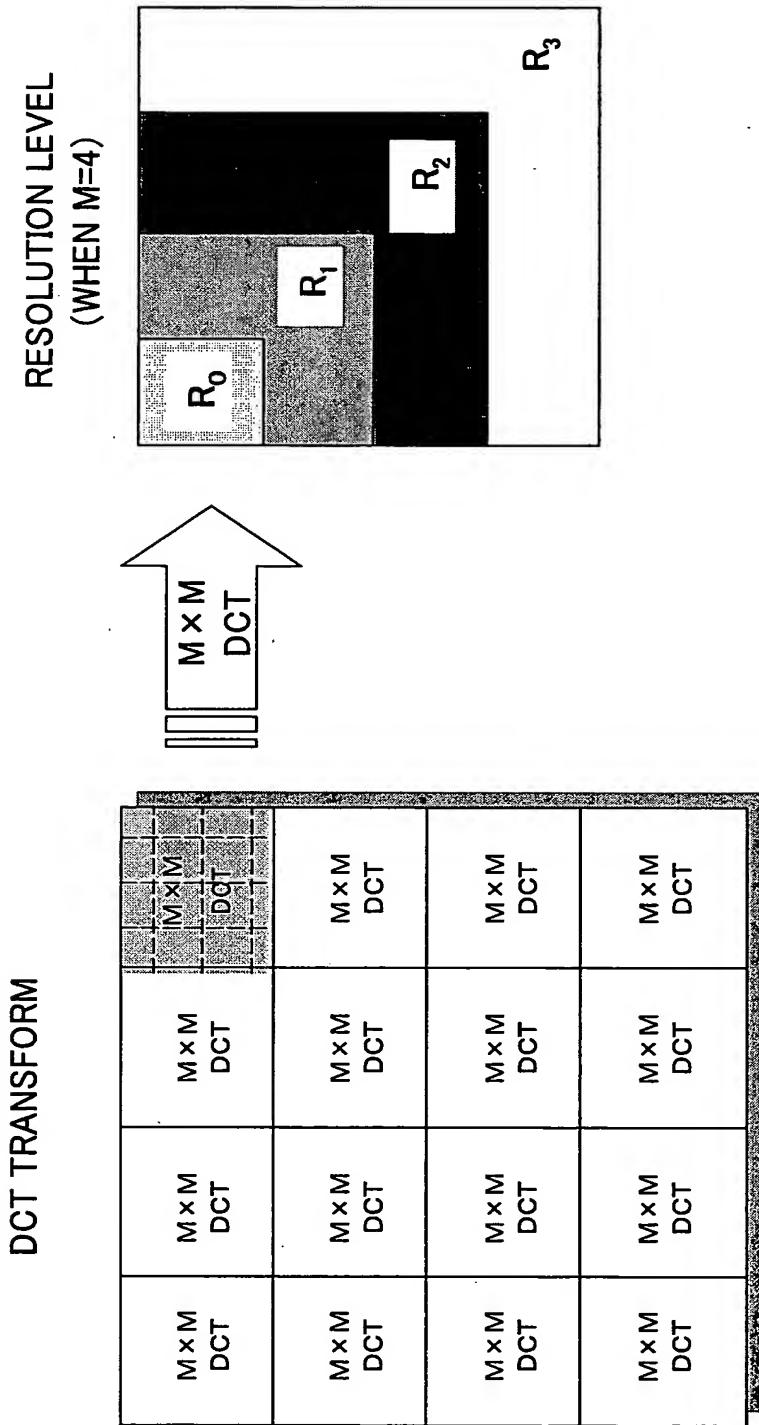
FIG.23

| | | | |
|--------------|--------------|--------------|--------------|
| M × M DCT | M × M DCT | M × M DCT | M × M DCT |
| M × M DCT | M × M DCT | M × M DCT | M × M DCT |
| M × M DCT | M × M DCT | M × M DCT | M × M DCT |
| M × M DCT | M × M DCT | M × M DCT | M × M DCT |

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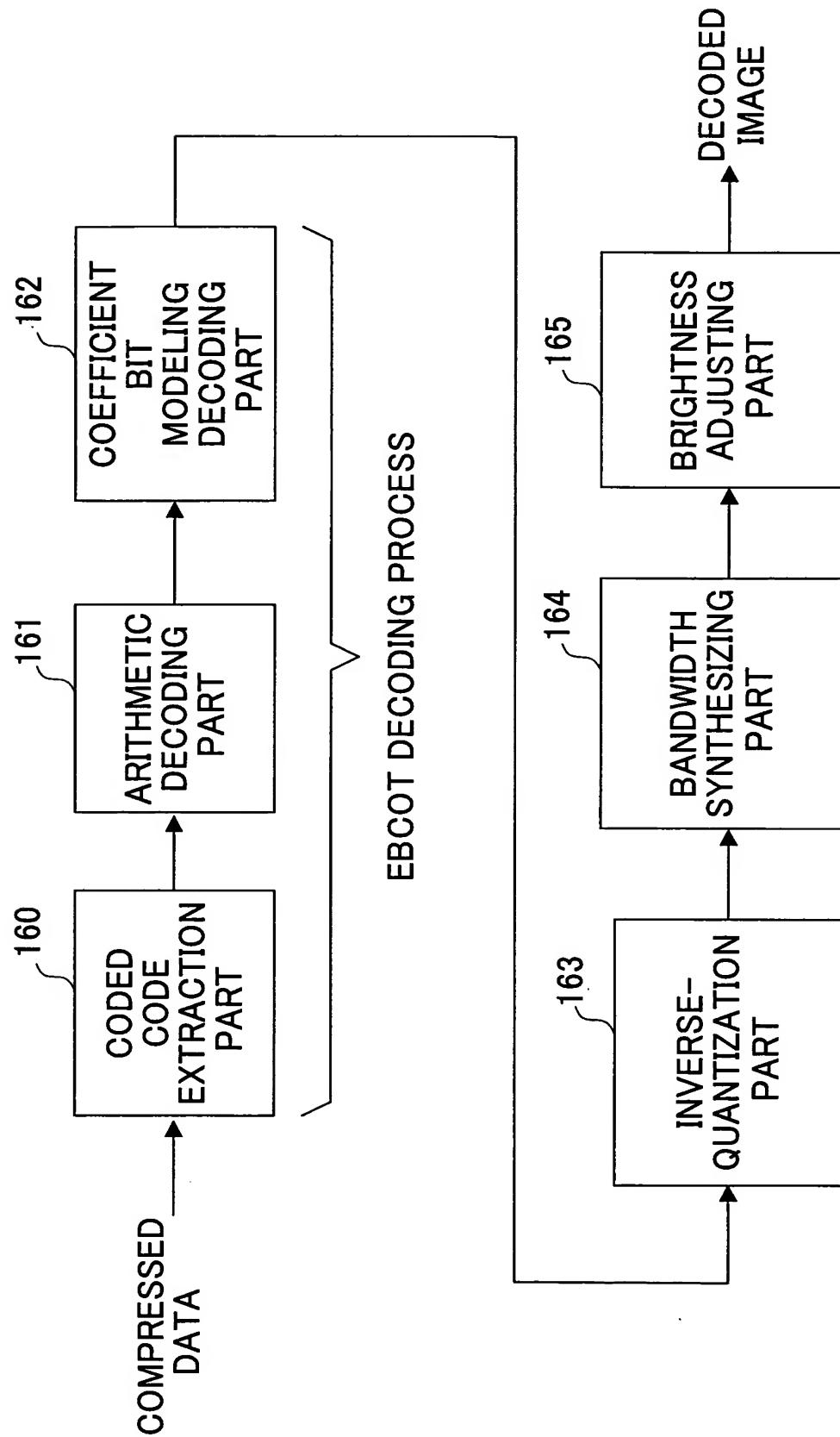
FIG.24



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FIG.25

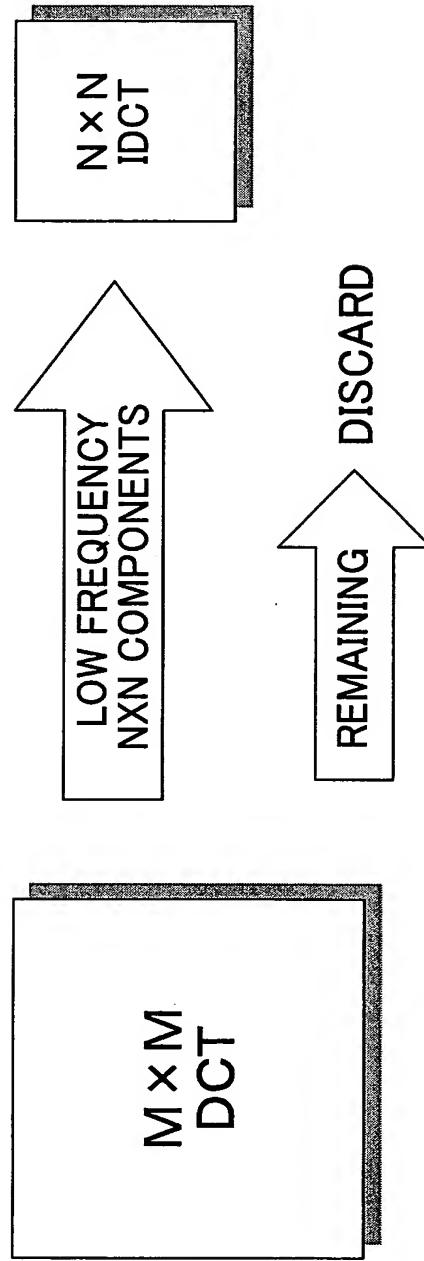


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FIG.26

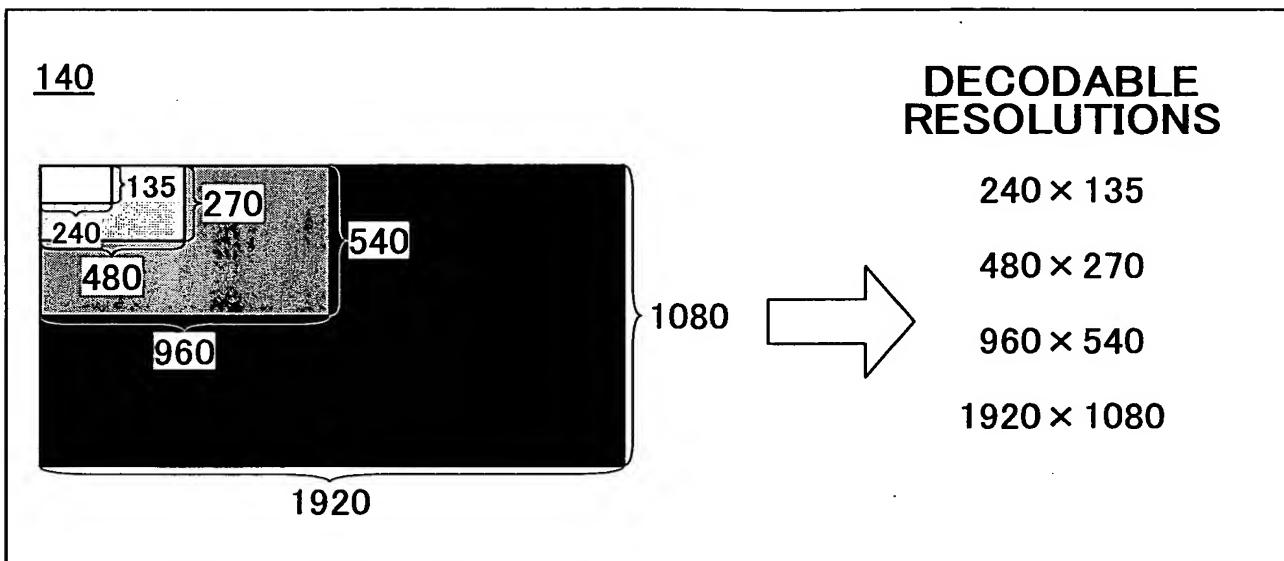
[FORWARD TRANSFORM] [INVERSE TRANSFORM]



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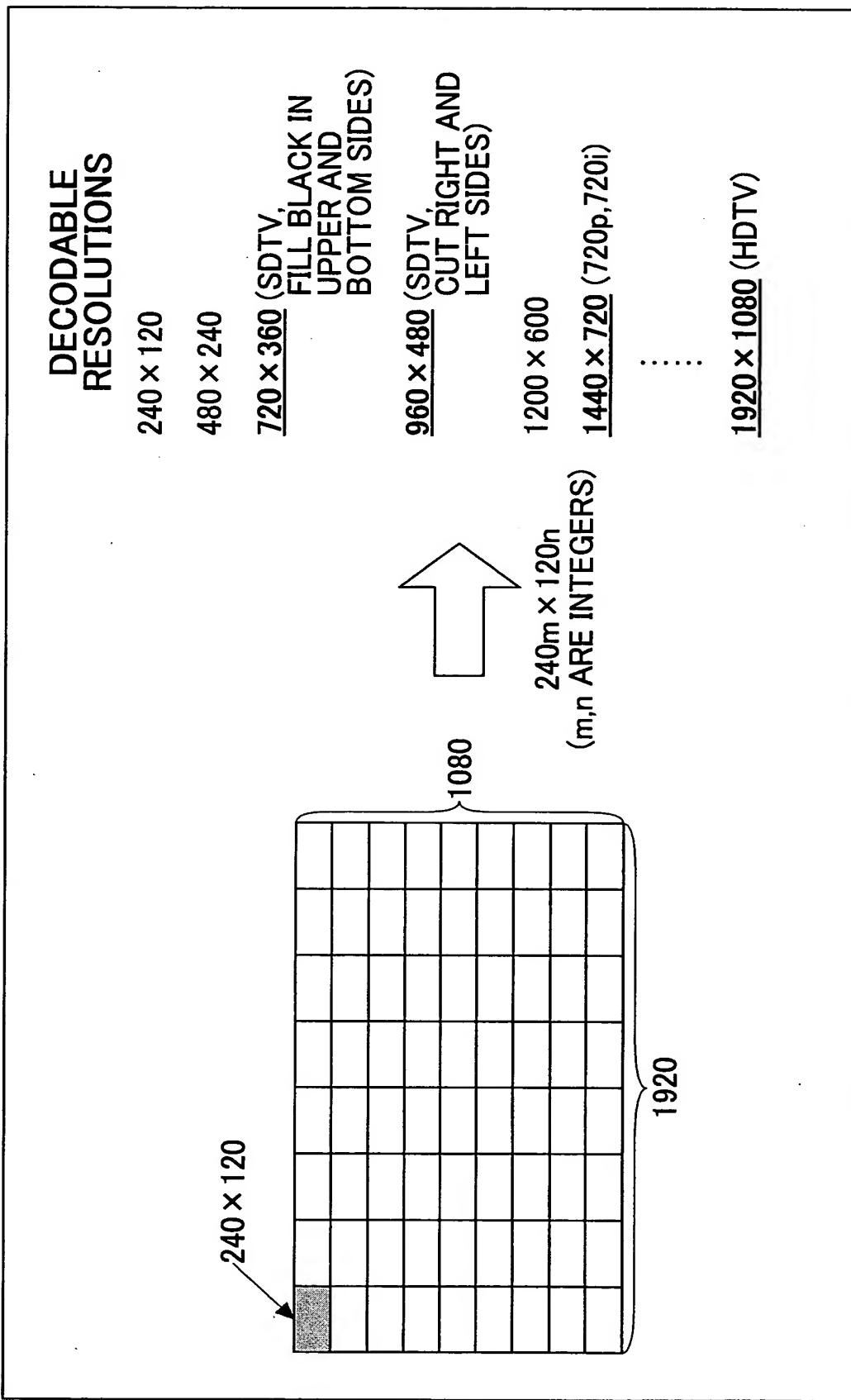
FIG.27



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FIG. 28



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FIG.29

| | |
|------------------|------------------------|
| ORIGINAL IMAGE | : SIDBA STANDARD IMAGE |
| NUMBER OF PIXELS | : 256*256 [pixels] |
| BIT WIDTH | : 8[bit/pixel] |
| NUMBER OF BYTES | : 65536 [bytes] |



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FIG.30A



ORIGINAL IMAGE SIZE (256*256)

FIG.30B



3/4 SCALE
RESOLUTION IMAGE
(192*192)

FIG.30C



2/4 SCALE
RESOLUTION IMAGE
(128*128)

FIG.30D



1/4 SCALE
RESOLUTION IMAGE
(64*64)

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FIG.31

| RESOLUTION | 1 TIMES (256*256) | 3/4 TIMES (192*192) | 2/4 TIMES (128*128) | 1/4 TIMES (64*64) |
|----------------------|----------------------|------------------------|------------------------|----------------------|
| CODE SIZE [Bytes] | 12705 (1.55bpp) | 10800 (2.34bpp) | 7706 (3.76bpp) | 2525 (4.93bpp) |
| PSNR [dB] | 39.96 | 39.24 | 37.20 | 33.75 |

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